Revised Definition of "Waters of the United States"

Tribal and State Webinars
Webinar 3:
Significant Nexus Standard
April 5, 2023

Tribal and State Webinar Series

- March 22, 2023: Overview
- March 30, 2023: Relatively Permanent Standard
- **April 5, 2023: Significant Nexus Standard**
- April 12, 2023: Exclusions and Other Topics

Please email wotus-outreach@epa.gov for registration information for the webinars.

Presentation Outline

- Significant Nexus Standard Overview
- Application to Tributaries, Adjacent Wetlands, and Waters Assessed Under Paragraph (a)(5)
- Significantly Affect
  - Material Influence
  - Functions and Factors
- Tools and Additional Resources
- Questions and Answers

Rule Status and Litigation Update

- On March 19, 2023, the U.S. District Court for the Southern District of Texas granted a motion preliminarily enjoining the 2023 final rule in Idaho and Texas. The agencies are reviewing the decision and their options.
- The rule took effect on March 20, 2023. The rule is currently operative in all jurisdictions of the United States except Idaho and Texas.
- In light of the preliminary injunction, the agencies are interpreting "waters of the United States" consistent with the pre-2015 regulatory regime in Idaho and Texas until further notice.

https://www.epa.gov/wotus/definition-waters-united-states-rule-status-and-litigation-update

Final Rule Framework

Categories of Jurisdictional Waters

(a)(1)

- (i) Traditional Navigable Waters
- (ii) Territorial Seas
- (iii) Interstate Waters

(a)(2) Impoundments of Jurisdictional Waters

(a)(3) Tributaries

(a)(4) Adjacent Wetlands

(a)(5) Intrastate lakes and ponds, streams, and wetlands that do not fall within (a)(1) – (a)(4)

***NOTE:** The categories of jurisdictional waters listed on this slide are shorthand categories that are being used for efficiency. See the final regulatory text at 33 CFR 328.3(a) and 40 CFR 120.2(a) for the full text of the categories.

Significant Nexus Standard - Overview

The “significant nexus standard” means waters that either alone or in combination with similarly situated waters in the region, significantly affect the chemical, physical, or biological integrity of paragraph (a)(1) waters.

Significant Nexus Standard - Overview

Certain waters under the final rule are jurisdictional if they meet the significant nexus standard.

- Tributaries – paragraph (a)(3)(ii)
- Adjacent Wetlands – paragraph (a)(4)(iii)
- Additional intrastate lakes and ponds, streams, and wetlands – paragraph (a)(5)(ii)

Significant Nexus Standard - Overview

Certain waters under the final rule will not be assessed under the significant nexus standard.

- Traditional navigable waters, the territorial seas, and interstate waters – paragraph (a)(1)
- Impoundments of "waters of the United States" – paragraph (a)(2)
- Tributaries that meet the relatively permanent standard – paragraph (a)(3)(i)
- Wetlands adjacent to paragraph (a)(1) waters – paragraph (a)(4)(i)
- Wetlands that meet the relatively permanent standard – paragraph (a)(4)(ii)
- Additional intrastate lakes and ponds, streams, and wetlands that meet the relatively permanent standard – paragraph (a)(5)(i)

Significant Nexus Standard - Overview

The final rule text includes a definition of "significantly affect."

- "Significantly affect" means a **material influence** on the **chemical, physical, or biological integrity** of waters identified in paragraph (a)(1) of this section. To determine whether waters, either alone or in combination with similarly situated waters in the region, have a material influence on the chemical, physical, or biological integrity of waters identified in paragraph (a)(1) of this section, the **functions** identified in paragraph (c)(6)(i) of this section will be assessed and the **factors** identified in paragraph (c)(6)(ii) of this section will be considered.

Functions

- Contribution of flow
- Trapping, transformation, filtering, and transport of materials (including nutrients, sediment, and other pollutants)
- Retention and attenuation of floodwaters and runoff
- Modulation of temperature in paragraph (a)(1) waters
- Provision of habitat and food resources for aquatic species located in paragraph (a)(1) waters

Factors

- Distance from a paragraph (a)(1) water
- Hydrologic factors, such as the frequency, duration, magnitude, timing, and rate of hydrologic connections, including shallow subsurface flow
- The size, density, or number of waters that have been determined to be similarly situated
- Landscape position and geomorphology
- Climatological variables such as temperature, rainfall, and snowpack

Significant Nexus Standard – Application to (a)(3) Tributaries

- Tributaries include natural, man-altered, or man-made water bodies that flow directly or indirectly into (a)(1) waters or (a)(2) impoundments.
  - Tributaries can include rivers, streams, lakes, ponds, and impoundments.
  - Tributaries can also include ditches and canals.

- Jurisdictional tributaries must meet either:
  - The relatively permanent standard OR
  - **The significant nexus standard**

Significant Nexus Standard – Application to (a)(3) Tributaries

- Tributaries meet the significant nexus standard if they either alone or in combination with similarly situated waters in the region, significantly affect the chemical, physical, or biological integrity of paragraph (a)(1) waters.
- The 2023 Rule preamble explains the scope of significant nexus (i.e., which waters are "similarly situated" "in the region").
  - Adjacent wetlands and tributaries are aggregated together within the catchment of the tributary of interest.

Significant Nexus Standard – Application to (a)(4) Adjacent Wetlands

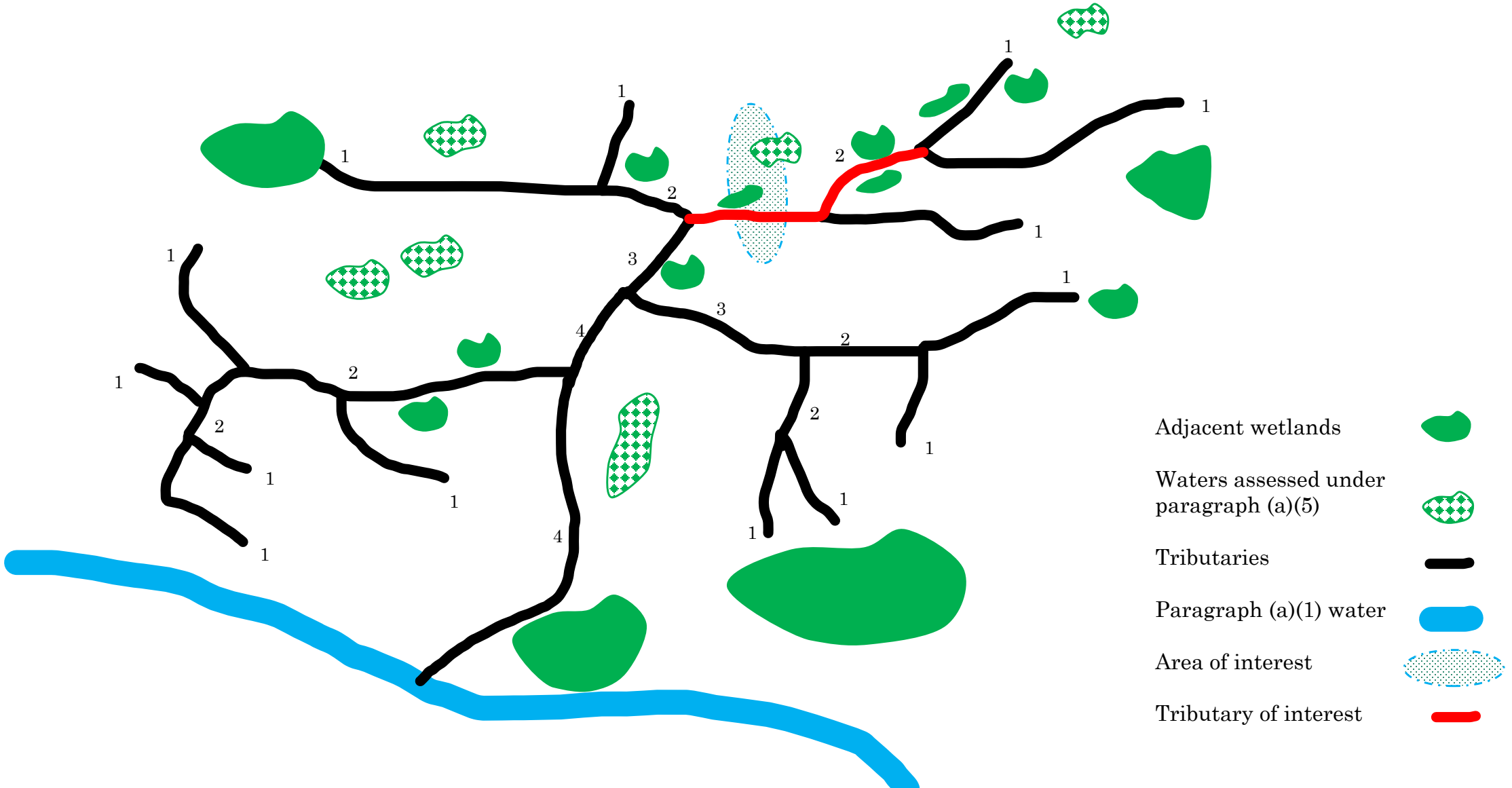
Jurisdictional adjacent wetlands include:

- Wetlands that are adjacent to an (a)(1) water;
- Adjacent wetlands that meet the relatively permanent standard;
- **Adjacent wetlands that meet the significant nexus standard.**

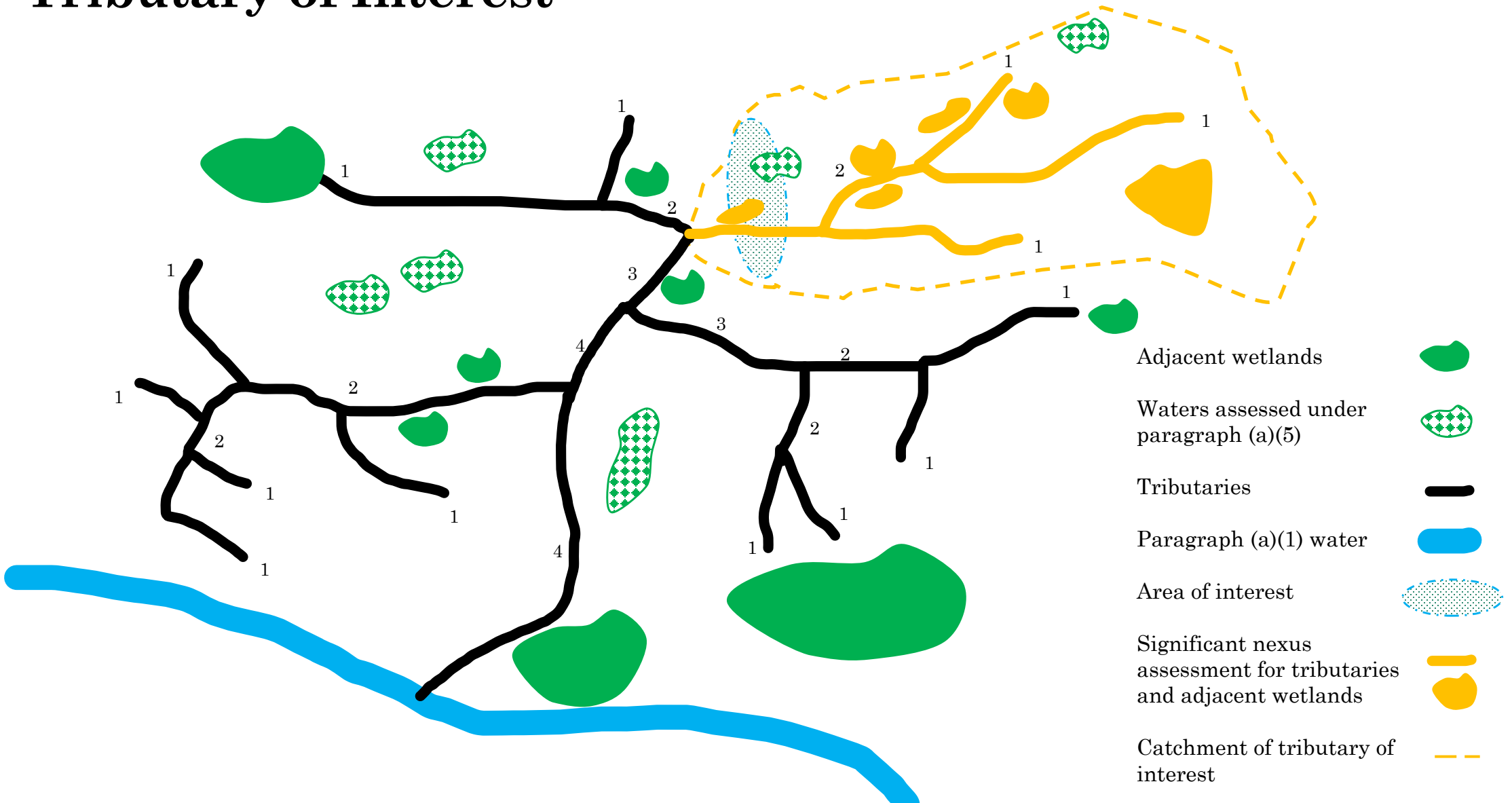
Significant Nexus Standard – Application to (a)(4) Adjacent Wetlands

- Adjacent wetlands meet the significant nexus standard if they either alone or in combination with similarly situated waters in the region, significantly affect the chemical, physical, or biological integrity of paragraph (a)(1) waters.
- The 2023 Rule preamble explains the scope of significant nexus (i.e., which waters are "similarly situated" "in the region").
  - Adjacent wetlands and tributaries are aggregated together within the catchment of the tributary of interest.

Significant Nexus Standard – Identifying the Tributary of Interest



Significant Nexus Standard – Identifying Tributaries and Adjacent Wetlands within the Catchment of the Tributary of Interest



Significant Nexus Standard – Tools and Resources

Tools for identifying the catchment of the tributary of interest:

- Manual Delineation - USGS Topographic Maps, elevation models/datasets
- ArcMap/ArcGIS
- USGS National Hydrography Dataset
- USGS StreamStats
- EPA's EnviroAtlas Interactive Map

Significant Nexus Standard – Tools and Resources

Tools for identifying waters on the landscape:

- USGS National Hydrography Dataset
- USGS Topographic Maps
- USEPA WATERS GeoViewer
- USFWS National Wetland Inventory
- Aerial Photography
- NRCS Web Soil Survey
- State/Tribal/Local Mapping Resources
- Field Observations
- Scientific Literature

Significant Nexus Standard – Application to (a)(5) Waters

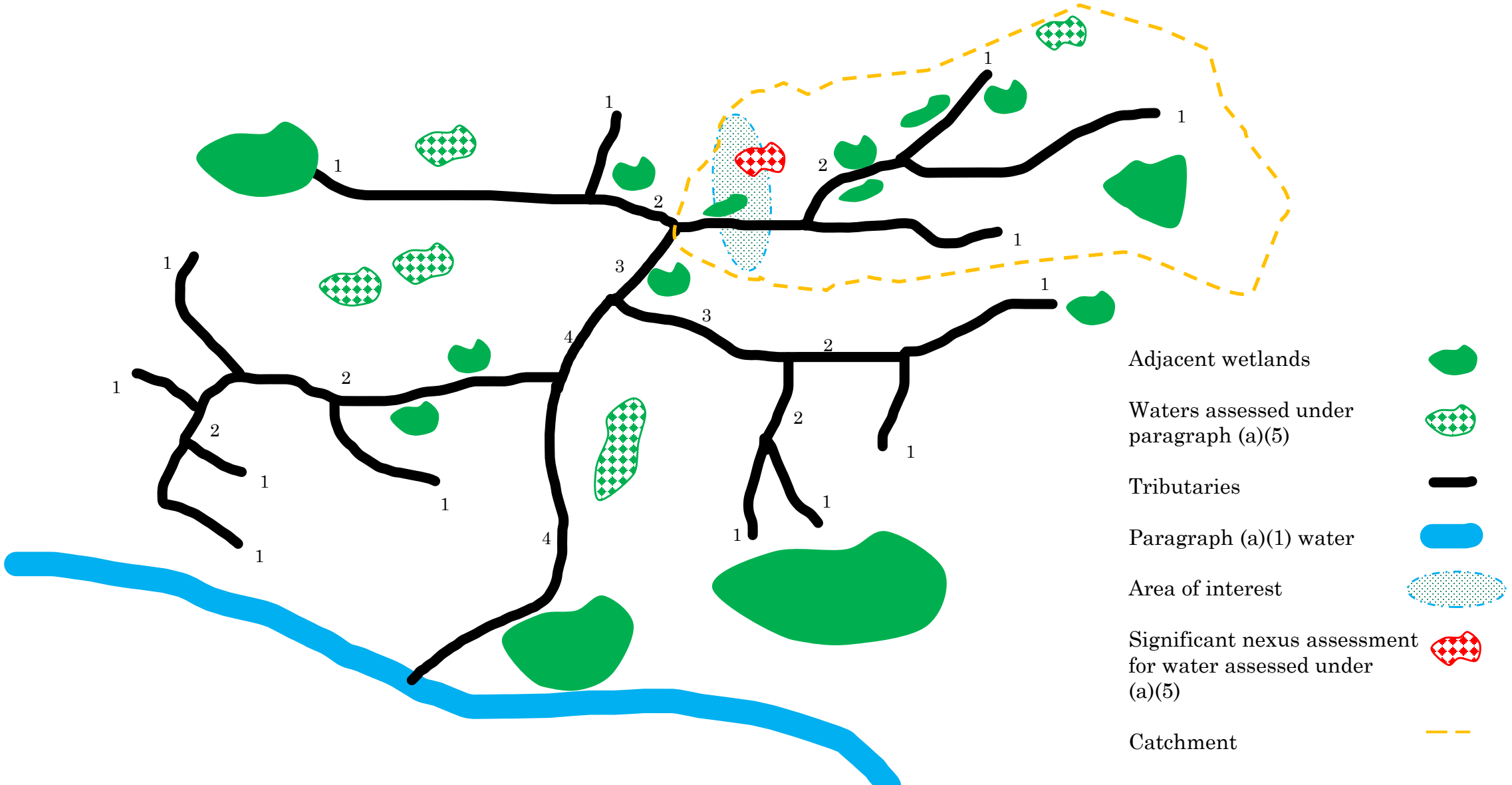
Jurisdictional (a)(5) waters include intrastate lakes and ponds, streams, and wetlands not identified in the other jurisdictional categories, that meet either:

- The relatively permanent standard OR
- **The significant nexus standard**

Significant Nexus Standard – Application to (a)(5) Waters

- Waters assessed under paragraph (a)(5) meet the significant nexus standard if they either alone or in combination with similarly situated waters in the region, significantly affect the chemical, physical, or biological integrity of paragraph (a)(1) waters.
- The 2023 Rule preamble explains the scope of significant nexus (i.e., which waters are "similarly situated" "in the region").
  - Waters assessed under paragraph (a)(5) will generally be assessed individually.

Significant Nexus Standard – Application to (a)(5) Waters



Significant Nexus Standard – Identifying the Relevant Paragraph (a)(1) Water

- The relevant paragraph (a)(1) water may be a traditional navigable, the territorial seas, or an interstate water.
- The relevant paragraph (a)(1) water for a significant nexus analysis for a tributary or adjacent wetland would be:
  - The nearest paragraph (a)(1) water downstream of the tributary of interest.
- The relevant paragraph (a)(1) water for a significant nexus analysis for a potential paragraph (a)(5) water would be:
  - The nearest paragraph (a)(1) water downstream from the subject water.

Significantly Affect – Overview

The final rule text includes a definition of "significantly affect."

- "Significantly affect" means a **material influence** on the **chemical, physical, or biological integrity** of waters identified in paragraph (a)(1) of this section. To determine whether waters, either alone or in combination with similarly situated waters in the region, have a material influence on the chemical, physical, or biological integrity of waters identified in paragraph (a)(1) of this section, the **functions** identified in paragraph (c)(6)(i) of this section will be assessed and the **factors** identified in paragraph (c)(6)(ii) of this section will be considered.

Functions

- Contribution of flow
- Trapping, transformation, filtering, and transport of materials (including nutrients, sediment, and other pollutants)
- Retention and attenuation of floodwaters and runoff
- Modulation of temperature in paragraph (a)(1) waters
- Provision of habitat and food resources for aquatic species located in paragraph (a)(1) waters

Factors

- Distance from a paragraph (a)(1) water
- Hydrologic factors, such as the frequency, duration, magnitude, timing, and rate of hydrologic connections, including shallow subsurface flow
- The size, density, or number of waters that have been determined to be similarly situated
- Landscape position and geomorphology
- Climatological variables such as temperature, rainfall, and snowpack

Significantly Affect – Material Influence

The 2023 Rule specifies that a "material influence" is required for the significant nexus standard to be met.

- The phrase "material influence" establishes that the agencies will be assessing the influence of the waters either alone or in combination on the chemical, physical, or biological integrity of a paragraph (a)(1) water and will provide qualitative and/or quantitative information and articulate a reasoned basis for determining that the waters being assessed significantly affect a paragraph (a)(1) water.

Significantly Affect – Chemical, Physical, or Biological Integrity

A water can meet the significant nexus standard if it significantly affects any one form of chemical, physical, or biological integrity of a paragraph (a)(1) water.

Significantly Affect – Functions and Factors

- The 2023 Rule identifies specific **functions** that will be assessed and identifies specific **factors** that will be considered when assessing whether the functions provided by the water, alone or in combination, have a material influence on the integrity of a traditional navigable water, the territorial seas, or an interstate water.
- The **functions** assessed in this rule are indicators that are tied to the chemical, physical, or biological integrity of paragraph (a)(1) waters.
- The **factors** considered in this rule are readily understood criteria that influence the types and strength of chemical, physical, or biological connections and associated effects on downstream paragraph (a)(1) waters.

Significantly Affect – Functions

The final rule text includes functions to be assessed:

(A) Contribution of flow;

(B) Trapping, transformation, filtering, and transport of materials (including nutrients, sediment, and other pollutants);

(C) Retention and attenuation of floodwaters and runoff;

(D) Modulation of temperature in waters identified in paragraph (a)(1) of this section; or

(E) Provision of habitat and food resources for aquatic species located in waters identified in paragraph (a)(1) of this section.

Significantly Affect – Functions

Contribution of flow

- Upstream waters can be a cumulative source of the majority of the total mean annual flow to bigger downstream rivers and waters, including via the recharge of baseflow.
- Streams, wetlands, and open waters contribute surface and subsurface water downstream and are the dominant sources of water in most rivers.
- Contribution of flow can help sustain the volume of water in larger waters which also influences the concentrations of chemicals within those waters.

Significantly Affect – Functions

Trapping, transformation, filtering, and transport of materials (including nutrients, sediment, and other pollutants)

- Streams can transport excess nutrients, excess sediment, contaminants bound to sediment, and other pollutants downstream.
- Sediment storage and export via streams to downstream waters is important for maintaining the physical river network, including the formation of channel features.
- Nutrient recycling in upstream waters results in the uptake and transformation of large quantities of nitrogen, and other nutrients that otherwise would be transported directly downstream, thereby decreasing impairments of paragraph (a)(1) waters.
- Streams, wetlands, and open waters also improve water quality through the assimilation and sequestration of pollutants, including chemical contaminants such as pesticides and metals that can degrade the integrity of paragraph (a)(1) waters.

Significantly Affect – Functions

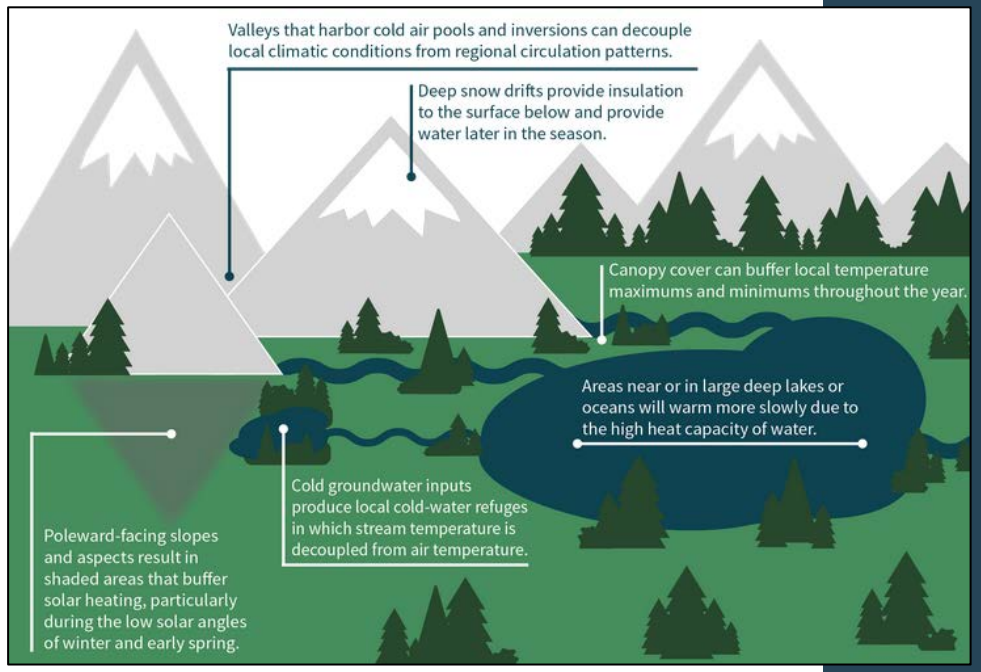
Retention and attenuation of floodwaters and runoff

- Wetlands and small streams are particularly effective at retaining and attenuating floodwaters.
- By retaining large volumes of stormwater that could otherwise negatively affect the condition or function of downstream waters, streams, wetlands, and open waters affect the physical integrity of paragraph (a)(1) waters.
- Retention and subsequent slowed release of floodwaters can reduce flood peaks in paragraph (a)(1) waters and can also maintain river baseflows in paragraph (a)(1) waters by recharging alluvial aquifers.

Significantly Affect – Functions

Modulation of temperature in paragraph (a)(1) waters

- Water temperature is critical to the distribution and growth of aquatic life in downstream waters, both directly (through its effects on organisms) and indirectly (through its effects on other physiochemical properties, such as dissolved oxygen and suspended solids).
- Tributaries provide cold and warm water that are critical for protecting aquatic life in downstream paragraph (a)(1) waters.
- Floodplain wetlands and open waters also exert significant controls on water temperature in the downgradient tributary network and ultimately in the paragraph (a)(1) water.

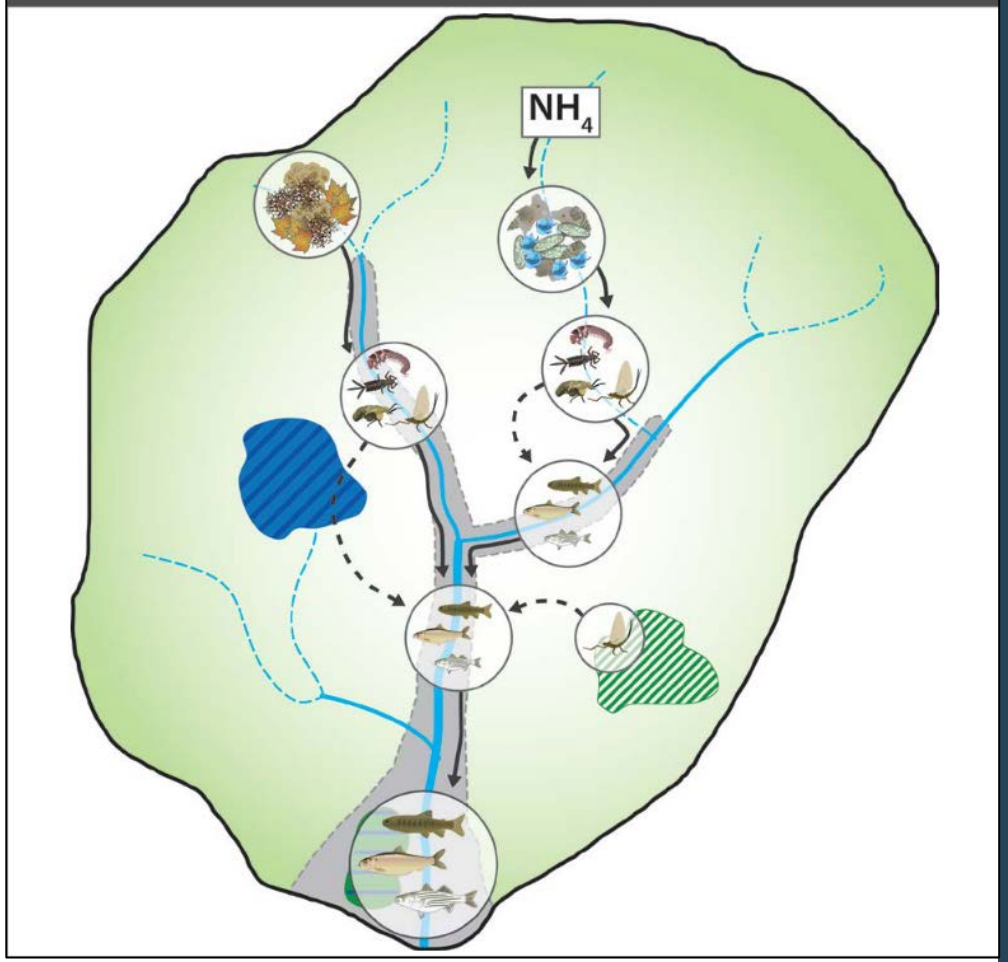


Significantly Affect – Functions

Provision of habitat and food resources for aquatic species located in waters identified in paragraph (a)(1)

- Streams, wetlands, and open waters supply habitat and food resources for paragraph (a)(1) waters, such as dissolved and particulate organic matter (*e.g.*, leaves, wood), which support biological activity throughout the river network.
- Waters can export organic matter and food resources downstream, such as aquatic insects that are the food source for fish in paragraph (a)(1) waters.
- Waters provide life-cycle dependent aquatic habitat for species located in paragraph (a)(1) waters.
- Headwater streams can provide refuge habitat when adverse conditions exist in the larger waterbodies downstream.

Figure 2-14. Illustration of the sequential transformation of materials as they move through the river network, via either downstream transport with water flow (solid black arrows) or via aerial or terrestrial movements (dashed black arrows). Here, an ephemeral headwater stream exports organic matter (at left) and an intermittent headwater stream exports ammonium, which is incorporated into algal biomass (at right). Macroinvertebrates consume these basal food resources and transform them into biomass, which in turn is eaten and transformed into fish biomass in both local and downstream reaches.



Significantly Affect – Functions

Some important functions provided by wetlands, tributaries, and waters assessed under paragraph (a)(5) will not be considered when making jurisdictional decisions as they do not have a nexus to the chemical, physical, or biological integrity of paragraph (a)(1) waters:

- Carbon sequestration benefits that aquatic resources like wetlands provide
- Provision of habitat for non-aquatic species such as migratory birds
- Soil fertility in terrestrial systems
- Provision of areas for personal enjoyment; ceremonial or religious uses; production of fuel, forage, and fibers; extraction of materials; plants for clothes and other materials; and medical compounds from wetland and aquatic plants or animals

Significantly Affect – Factors

The final rule text includes factors to consider:

(A) The distance from a water identified in paragraph (a)(1) of this section;
(B) Hydrologic factors, such as the frequency, duration, magnitude, timing, and rate of hydrologic connections, including shallow subsurface flow;
(C) The size, density, or number of waters that have been determined to be similarly situated;
(D) Landscape position and geomorphology; and
(E) Climatological variables such as temperature, rainfall, and snowpack.

Significantly Affect – Factors

Distance from a water identified in paragraph (a)(1)

- When evaluating functions and factors, the likelihood of a material influence is generally greater with decreasing distance from a paragraph (a)(1) water.

The size, density, or number of similarly situated waters

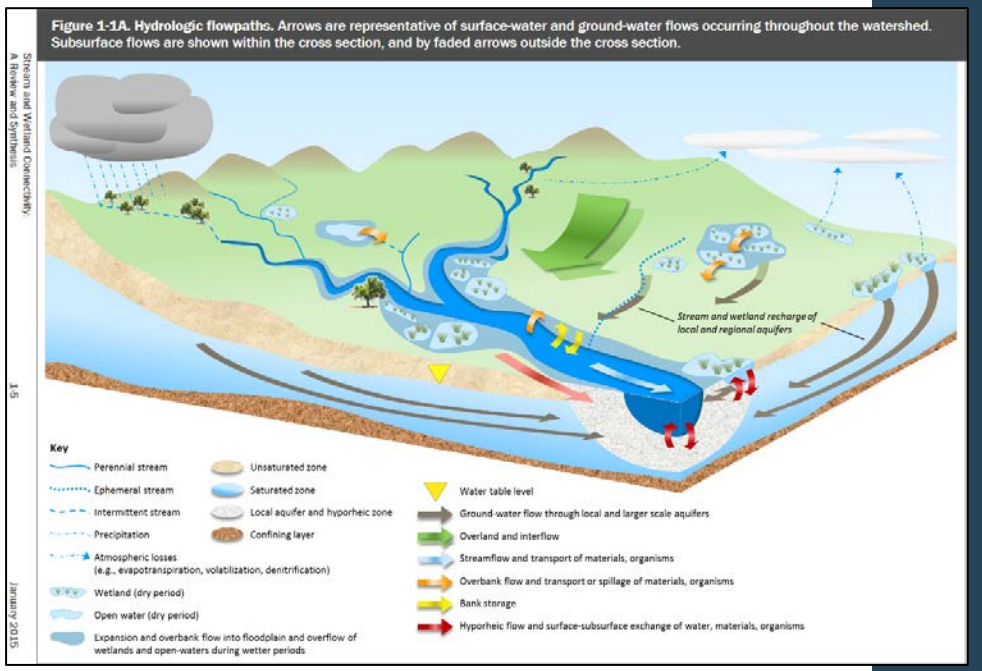
- The likelihood of a material influence is generally greater with increases in the number or size of the waters(s) being considered, and with increased density of the water(s) being considered.
- However, in watersheds with fewer aquatic resources, a smaller number and/or lower density of similarly situated waters can have disproportionate effects on paragraph (a)(1) waters.

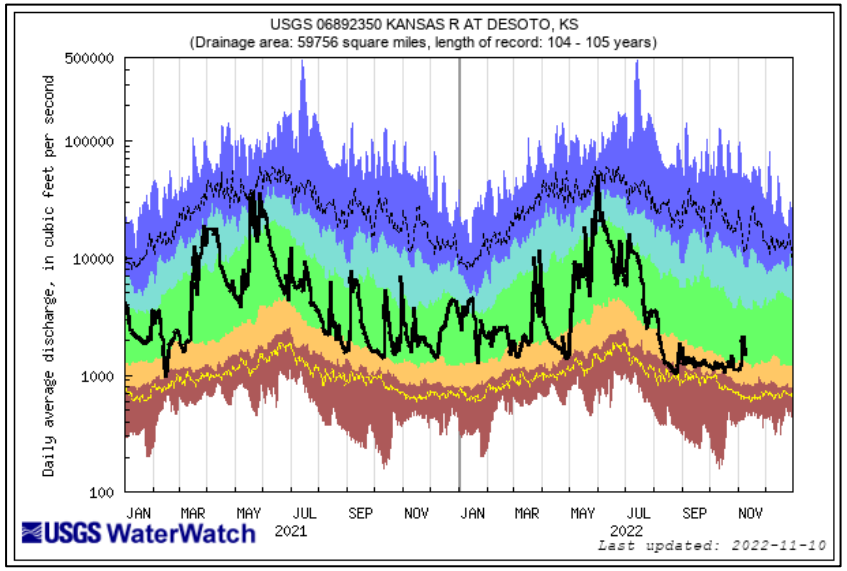
Significantly Affect – Factors

Hydrologic Factors

Hydrologic factors include: frequency, duration, magnitude, timing, and rate of hydrologic connections, as well as surface and shallow subsurface hydrologic connections.

- The presence of a surface or shallow subsurface hydrologic connection, as well as increased frequency, magnitude, or duration of such connections, can increase the strength of the functions that the subject waters provide to paragraph (a)(1) waters, and the corresponding chemical, physical (i.e., hydrologic), or biological influence that a water has on paragraph (a)(1) waters.
- In some situations, streams with low duration but a high volume of flow can provide strong functions to paragraph (a)(1) waters by transporting large volumes of water, sediment, and woody debris that help maintain the integrity of those larger waters.
- The lack of hydrologic connections can also in some cases contribute to the strength of effects for certain functions such as floodwater attenuation or the retention and transformation of nutrients and other pollutants.





Significantly Affect – Factors

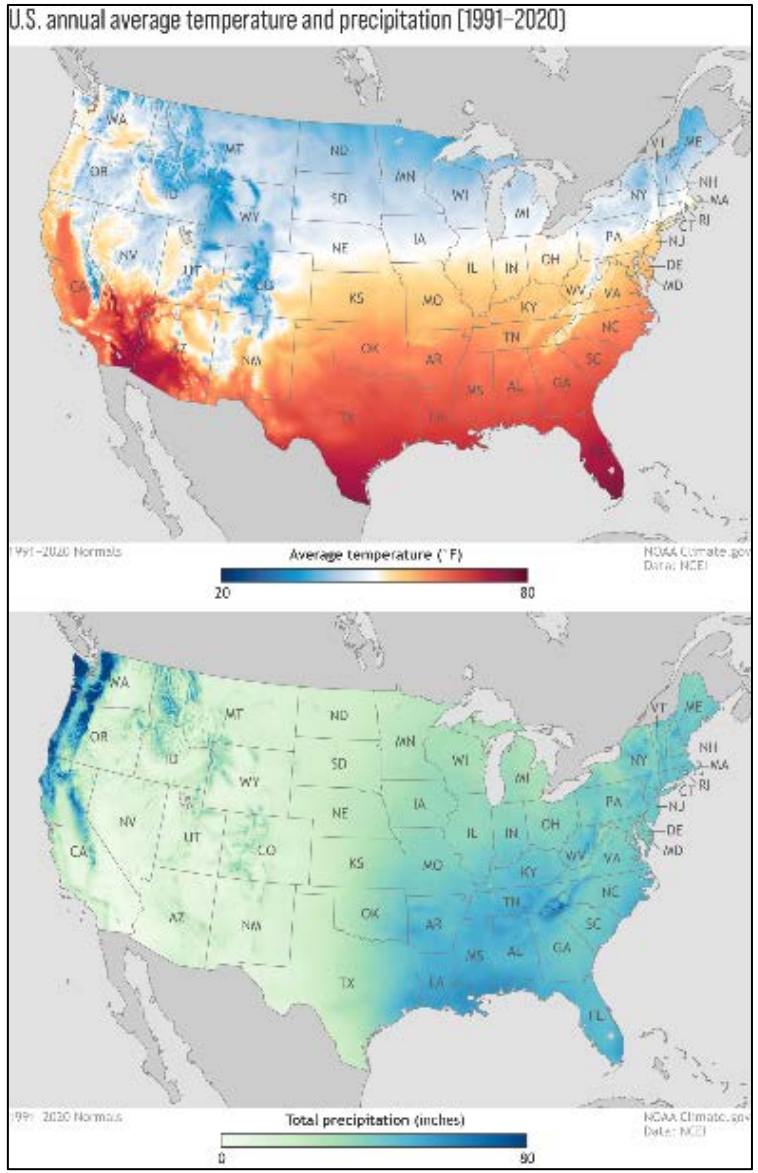
Landscape position and geomorphology

- Landscape position and geomorphology provide critical information about the relative location of the subject waters being considered within the watershed and their spatial relationship to the paragraph (a)(1) water.
- The topography, slope, soil composition, soil porosity, soil transmissivity, and waterbody substrate composition and other physical characteristics (e.g., channel shape), can all impact the strength of effects of the functions identified in this rule and the associated influence on paragraph (a)(1) waters.

Significantly Affect – Factors

Climatological variables (e.g., temperature, rainfall, and snowpack)

- Climatological factors like temperature, rainfall, and snowpack in a given region can influence the strength of the functions provided by the subject waters to paragraph (a)(1) waters by affecting the frequency, duration, magnitude, timing, and rate of hydrological connections.
  - For example, rainfall patterns in a geographic region may lead to more frequent hydrologic connections and translate to a higher likelihood of effects on paragraph (a)(1) waters.
  - Conversely, rainfall patterns in another region may translate to a low likelihood of effects on paragraph (a)(1) waters.



Tools and Resources

Chemical Integrity

- USGS water quality monitoring stations
- State, Tribal, and local water quality reports
- Water quality monitoring and assessment databases
- EPA's How's My Waterway
- EPA's NEPAssist
- National Land Cover Database (NLCD)
- EPA's HAWQS
- LIDAR-based topography with precipitation totals
- Scientific literature and references

Tools and Resources

Physical Integrity

- USGS stream gage data
- Floodplain maps
- Statistical analyses
- Hydrologic models & modeling (i.e., USGS's StreamStats or HEC–RAS)
- Physical indicators of flow such as reliable OHWM with a channel defined by bed and banks
- NRCS soil surveys
- Precipitation and rainfall data (e.g., using the Antecedent Precipitation Tool)
- NRCS snow telemetry (SNOTEL) data
- NOAA national snow analyses maps
- Scientific literature and references

Tools and Resources

Biological Integrity

- Population survey data and/or reports from federal, state, and Tribal resource agencies
- Natural history museum collections databases
- Bioassessment program databases
- Fish passage inventories
- U.S. Fish and Wildlife Service Critical Habitat layers
- Species distribution models
- Scientific literature and references from studies pertinent to the distribution and natural history of the species under consideration.

Significant Nexus Standard – Applicability of Analysis

- The determination of jurisdiction in an approved jurisdictional determination applies only to the subject waters located in the area of interest and is a case-specific determination based, except in the case of a potential enforcement action, on current conditions.
- As such, where a subject water, either alone or in combination with similarly situated waters in the region, is found to significantly affect a paragraph (a)(1) water, only the subject water within the review area would be determined to be jurisdictional.
- Similarly, where a subject water, either alone or in combination with similarly situated waters in the region, is found not to significantly affect a paragraph (a)(1) water, only the subject water within the review area would be determined to be non-jurisdictional.

Additional Resources: JD Form and Guidebook

- The Corps will use the interim 2023 Rule Approved Jurisdictional Determination Form (the "2023 Rule AJD Form") to document the basis of jurisdiction for AJDs completed under the 2023 Rule.
- For more information:

https://www.usace.army.mil/Missions/Civil-Works/Regulatory-Program-and-Permits/juris_info/

Information on finalized AJDs:

- Corps Website: https://permits.ops.usace.army.mil/orm-public#
- EPA Website: https://watersgeo.epa.gov/cwa/CWA-JDs/

Additional Resources: Implementation Memoranda

- EPA and Army have prepared a new **Coordination Memo** to ensure consistency of jurisdictional determinations under the final rule.
- EPA and Army have also partnered with USDA to prepare a new **Ag Memo** that clarifies the agencies' roles and programs, and in particular clarifies the prior converted cropland exclusion under the final rule.
- EPA and Army will continue to use the legal memorandum **Waters That Qualify as "Traditional Navigable Waters" Under Section (a)(1) of the Agencies' Regulations** (formerly known as Appendix D) to provide guidance for identifying traditional navigable waters.
- EPA and Army are also retaining the **2020 Ditch Exemption Memo** clarifying implementation of the ditch exemption under Clean Water Act section 404(f).

https://www.epa.gov/wotus

Additional Resources: Fact Sheets

- The **public fact sheet** provides a general overview of the final rule.
- The **agricultural community fact sheet** highlights particular areas of interest to the agricultural community.
- The **landowners guide fact sheet** is intended to assist landowners in determining whether activities on their land require a Clean Water Act permit.

https://www.epa.gov/wotus

Additional Information

- See https://www.epa.gov/wotus for additional information.
- Please contact wotus-outreach@epa.gov with questions.

Questions and Answers

Please type your questions into the chat box.